

(3) Service brake tests shall be conducted under the direction of the mine operator in cooperation with an according to the instructions provided by the MSHA inspector as follows:

(i) Equipment capable of traveling at least 10 miles per hour shall be tested with a typical load for that particular piece of equipment. Front-end loaders shall be tested with the loader bucket empty. Equipment shall not be tested when carrying hazardous loads, such as explosives.

(ii) The approach shall be sufficient length to allow the equipment operator to reach and maintain a constant speed between 10 and 20 miles per hour prior to entering the 100 foot measured area. The constant speed shall be maintained up to the point when the equipment operator receives the signal to apply the brakes. The roadway shall be wide enough to accommodate the size of the equipment being tested. The ground shall be generally level, packed, and dry in the braking portion of the test course. Ground moisture may be present to the extent that it does not adversely affect the braking surface.

(iii) Braking is to be performed using only those braking systems, including auxiliary retarders, which are designed to bring the equipment to a stop under normal operating conditions. Parking or emergency (secondary) brakes are not to be actuated during the test.

(iv) The tests shall be conducted with the transmission in the gear appropriate for the speed the equipment is traveling except for equipment which is designed for the power train to be disengaged during braking.

(v) Testing speeds shall be a minimum of 10 miles per hour and a maximum of 20 miles per hour.

(vi) Stopping distances shall be measured from the point at which the equipment operator receives the signal to apply the service brakes to the final stopped position.

(4) Test results shall be evaluated as follows:

(i) If the initial test run is valid and the stopping distance does not exceed the corresponding stopping distance listed in Table 1, the performance of the service brakes shall be considered acceptable. For tests to be considered valid, the equipment shall not slide

sideways or exhibit other lateral motion during the braking portion of the test.

(ii) If the equipment exceeds the maximum stopping distance in the initial test run, the mine operator may request from the inspector up to four additional test runs with two runs to be conducted in each direction. The performance of the service brakes shall be considered acceptable if the equipment does not exceed the maximum stopping distance on at least three of the additional tests.

(5) Where there is not an appropriate test site at the mine or the equipment is not capable or traveling at least 10 miles per hour, service brake tests will not be conducted. In such cases, the inspector will rely upon other available evidence to determine whether the service brake system meets the performance requirement of this standard.

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#### § 56.14102 Brakes for rail equipment.

Braking systems on railroad cars and locomotives shall be maintained in functional condition.

#### § 56.14103 Operators stations.

(a) If windows are provided on operators' stations of self-propelled mobile equipment, the windows shall be made of safety glass or material with equivalent safety characteristics. The windows shall be maintained to provide visibility for safe operation.

(b) If damaged windows obscure visibility necessary for safe operation, or create a hazard to the equipment operator, the windows shall be replaced or removed. Damaged windows shall be replaced if absence of a window would expose the equipment operator to hazardous environmental conditions which would affect the ability of the equipment operator to safely operate the equipment.

(c) The operator's stations of self-propelled mobile equipment shall—

(1) Be free of materials that could create a hazard to persons by impairing the safe operation of the equipment; and

(2) Not be modified, in a manner that obscures visibility necessary for safe operation.